

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A micro-machined electromechanical sensor (MEMS) device, comprising a serpentine flexure comprising:

a plurality of spaced-apart elongated flexure members formed through the thickness of a substrate as substantially planar elements and being relatively narrow as measured crosswise to their longitudinal axes;

a plurality of relatively short interconnecting members arranged crosswise to the longitudinal axes of the elongated flexure members and interconnecting opposite ends of alternate pairs of the elongated flexure members in a serpentine configuration, including first and last relatively short interconnecting members arranged crosswise to the longitudinal axes of respective first and last ones of the elongated flexure members and being structured for interconnecting the respective first and last elongated flexure members between relatively movable and immovable device components; and

means for internally-caging one or more of the spaced-apart elongated flexure members, the means for internally-caging comprising an extension formed on one end of one or more of the interconnecting members and extending a part of the distance between one of the members interconnecting one pair of the spaced-apart elongated flexure members and an end of a next adjacent member interconnecting a next adjacent pair of the spaced-apart elongated flexure members.

Claim 2 (cancelled)

Claim 3 (cancelled)

Claim 4 (original): The device of claim 1 wherein the plurality of spaced-apart elongated flexure members are resiliently flexible in a single direction that is substantially crosswise to their respective longitudinal axes.

Serial No. 10/736,330
Amdt. dated July 19, 2005
Reply to Office action of May 20, 2005

Claim 5 (original): The device of claim 4 wherein one or more of the plurality of spaced-apart elongated flexure members is thicker than one or more others of the elongated flexure members as measured along the single direction that is substantially crosswise to their respective longitudinal axes.

Claim 6 (reinstated): The device of claim 4, further comprising a relatively stationary frame and a moveable proof mass that is suspended from the frame for substantially in-plane motion by a plurality of the serpentine flexures.

Claim 7 (reinstated): The device of claim 6 wherein at least one of the frame and proof mass further comprises a promontory mass that is sized to span a part of the distance between an edge thereof and one of the crosswise interconnecting members.

Claim 8 (reinstated): The device of claim 7, further comprising a plurality of capacitive pickoff sensors formed between the proof mass and the frame.

Claims 9-20 (cancelled)

Claim 21: (cancelled)

Claim 22: (currently amended) The device of claim 21 wherein A micro-machined electromechanical sensor (MEMS) device having a serpentine flexure, the serpentine flexure comprising:

a plurality of elongated flexure members each formed through the thickness of a substrate as substantially planar elements;

a relatively short interconnecting member arranged crosswise to the longitudinal axes of the elongated flexure members and interconnecting opposite ends of alternate pairs of the elongated flexure members in a serpentine configuration, one or more of the plurality of elongated flexure members is being thicker than one or more others of the elongated flexure members; and
a small mass extending a part of a distance between adjacent elongated flexure members.

Claim 23 (currently amended): The device of claim 21, further comprising a relatively stationary frame and a moveable proof mass that is suspended from the frame by the serpentine flexure.

Claim 24 (previously presented): The device of claim 23 wherein at least one of the frame and proof mass further comprises a promontory mass that is sized to span a part of the distance between an edge thereof and one of the elongated flexure members.

Claim 25: (currently amended) ~~The device of claim 21 wherein the small mass further comprises A micro-machined electromechanical sensor (MEMS) device having a serpentine flexure, the serpentine flexure comprising:~~

a plurality of elongated flexure members each formed through the thickness of a substrate as substantially planar elements;

a relatively short interconnecting member arranged crosswise to the longitudinal axes of the elongated flexure members and interconnecting opposite ends of alternate pairs of the elongated flexure members in a serpentine configuration; and

a small mass comprising an extension formed on one end of the interconnecting member and extending a part of a distance between adjacent elongated flexure members.

Claim 26 (previously presented): The device of claim 25, further comprising a relatively stationary frame and a moveable proof mass that is suspended from the frame by the serpentine flexure.

Claim 27 (previously presented): The device of claim 26 wherein at least one of the frame and proof mass further comprises a promontory mass that is sized to span a part of a distance between an edge thereof and one of the interconnecting members.

Claim 28 (previously presented): The device of claim 26 wherein at least one of the interconnecting members further comprises an extension formed on one end of the interconnecting member and sized to span a part of a distance between the interconnecting member and an edge of an adjacent one of the frame and proof mass.

Claims 29-34: (cancelled)